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18 July 1963

MEMORANDUM FOR: Director of Central Intelligence

THROUGH : Acting Deputy Director (Research)

SUBJECT : OSA/DDR Programs Status Summaries

Forwarded as attachments are current status summaries for projects OXCART, TAGBOARD and IDEALIST, including the U-2 Carrier Operation concept. We have also attached a recapitulation of recent satellite reconnaissance launches with a brief description [redacted] 25X1A

(Signed) Jack C. Ledford

JACK C. LEDFORD
Colonel, USAF
Assistant Director
(Special Activities)

Attachments as stated

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USAF review(s) completed.

NRO and NAVY review(s) completed.

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OXCART and TAGBOARD
Status Summary

29 July 1963

1. OXCART: Since the first A-12 flight in April 1962, 415 flight hours in 296 flights have been made with six aircraft. A total of eight A-12's have been delivered to the operational site, including #3 aircraft which was destroyed. Five A-12's now are on flight status and two in a process of assembly at the operational location. A ninth A-12 will be delivered by the end of July and the tenth before the end of September. All except #4 aircraft (the trainer) are equipped with J-58 engines. The longest duration A-12 flight has been three hours and the highest altitude and speed combination: 72,000 feet at Mach 3.06. Flights up to 75,000 feet have been made at lower mach numbers. The intended speed is Mach 3.2 at 85,000 to 90,000 feet.

The J-58 engine development has continued at an accelerated rate. A recapitulation of significant J-58 development testing to date follows: total ground test hours - 8,600; Model D-20 test hours - 5,680; test time above Mach 2 - 1,200 hours, and 780 hours above Mach 3. The three A-12 camera systems, consisting of two entirely new camera systems and a modified camera from the U-2 program are in flight test in A-12 aircrafts. Results of these tests have been most encouraging.

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All other major critical components of the A-12 operational system developed specifically or modified for this program are now in flight test and include the inertial navigation system, stability augmentation system, autopilot, air induction system, pilot environment equipment and ARC-50 communications equipment for tanker rendezvous. Tanker support facilities at overseas bases are under construction. Nine operational pilots are in the training program at the operational site.

Flight tests of A-12 aircraft against simulated Soviet radars have commenced 16 July 1963 and will continue for several months. These tests will result in an evaluation of the special measures developed and taken to achieve a minimum radar echo. The development of countermeasures equipment for the A-12 aircraft, as a back-up approach, now is underway.

The A-12 flight test program on an accelerated basis is concentrating on optimizing aircraft and engine and accessory equipment performance to achieve and demonstrate the reliability of the entire system to perform the designed mission envelope. January 1964 is targeted for operational readiness.

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2. TAGBOARD (MD-21 Drone): Since Lockheed was given approval in February 1963, to proceed with the manufacture of twenty ramjet drone reconnaissance systems, which will use a modified A-12 as a launch vehicle, the program has been on schedule to deliver the first drone system within fifteen months for flight test. A [redacted] camera system being developed for this vehicle is on schedule. Another review of the drone concept is underway by Lockheed to determine the feasibility of retrieving the entire drone after a mission rather than solely an ejected package, which would include camera, film and the inertial navigation system, as originally contemplated. 25X1

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IDEALIST Status Summary

29 July 1963

1. Operations: During the period 11 May through 28 July 1963, nine successful U-2 overflights have been flown. These flights were: four missions which covered all of Laos and North Vietnam (except the Hanoi Basin) and part of China contiguous to Laos and North Vietnam; two missions which covered priority targets in North Korea and Manchuria; and three missions which covered possible nuclear energy installations in Central and South China. During one of the North Korean missions, a new Surface-to-Air Missile site near Pyongyang, Korea, was discovered. 25X1

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Additional missions have not been possible due to heavy cloudiness, rain and thunderstorms over Vietnam and South and Central China as a result of the southwest monsoonal flow during this period. Suitable weather for photography has occurred three times, each directly associated with typhoons. Clearing occurs in advance and west of moving storms and persists for very brief periods of time.

2. Special Group Mission Approvals: A bank of four missions has been approved by the Special Group for the China area, in addition to necessary missions to complete the North Vietnam coverage. The continuing approval is subject to monthly review by the Special Group. Missions are to be scheduled as target requirements and weather patterns dictate. COMOR has requested coverage of the following target areas:

Missile Test Range at Shuang-Cheng-Tzu.
The Peiping, Pao-Tou, Tai Yuan area.
South China industrial and military targets.
Manchuria and North China targets.

3. Aircraft Inventory: The inventory of U-2's now stands at nine.

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Two aircraft
One aircraft is at Edwards AFB, Calif.
Three aircraft are on loan to SAC at Barksdale AFB.
One aircraft is being modified at Lockheed, Burbank, Calif.
One aircraft is a test bed at Lockheed for systems and airframe improvements.
One aircraft is due at Lockheed for modification approximately 9 Sept. 1963.

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4. A product improvement program is in progress. It includes a new autopilot to improve the stability of the airborne platform, a re-designed instrument panel to ease the pilots' burden on extreme range flights, and an improved camera which will give a better product and also save weight. A series of tests have recently been completed to determine the amount of improvement in ground resolution that can be realized in the "B" camera configuration using a higher resolution film and a variable shutter speed. NPIC is currently evaluating this film. A 20% improvement in resolution is anticipated at high sun angles. The CORONA C''' camera is being modified for installation in a U-2. Test flights of this system are scheduled for the second week in September. Anticipated ground resolution of this configuration is 17" compared to 36" for the present "B" camera installation at 70,000' altitude. There is in the study stage,

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A capability to deploy two staging units simultaneously is being built at the Edwards AFB detachment.

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U-2 Carrier Operations
Status Summary

31 July 1963

1. Initial evaluations have been completed, and carrier operations by U-2 aircraft are considered feasible. While this concept has not been officially surfaced with JCS or DOD, key Navy officers have been contacted on an "in-house" basis and have assisted in the preliminary study. CSA representatives have completed an initial visit at San Diego to conduct a survey of the aircraft carrier Kitty Hawk and made arrangements for the test launch of a U-2 on 5 August 1963. Recovery of the U-2 aircraft will be at Lockheed Aircraft, Burbank, California.

2. It is planned to modify two U-2 aircraft for carrier operations including both take-off and recovery. Authority has been given for the procurement of known long-lead-time items, and an engineering proposal is presently being prepared by Lockheed Aircraft Corporation. It is estimated that the first modified aircraft will be available in November 1963, and an operational capability established by February 1964. The expected delivery date for the second carrier modified U-2 aircraft is January 1964.

3. Communications from a shore base to the carrier seems to be a solvable problem and at present requires augmentation of the carrier's cryptographic facilities. Shore base augmentation only will be dictated by the operational area involved.

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B. In response to direct inquiries from news media, the office of the Director of Naval Information will acknowledge that the Office of Naval Research is engaged in tests to determine the feasibility of handling and launching of U-2's from an aircraft carrier. If the tests are successful, the U-2 will then be used for experimental tests of submarine detection equipment. Further details of the project are classified.

C. The foregoing cover proposal has been approved by CIA, the Director of the Office of Naval Research, and the Acting Deputy Chief of Naval Operations (Development). It is currently being distributed to members of the Cover Committee for final review and approval.

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